

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Patent Application No. 09/824,049

REMARKS

Reconsideration and allowance of the subject application are respectfully requested. By this Amendment, Applicant has added new claims 14-18. Thus, claims 1-18 are now pending in the application. In response to the Office Action (Paper No. 4), Applicant respectfully submits that the pending claims define patentable subject matter.

Claims 11 and 12 are rejected under 35 U.S.C. § 112, first paragraph, because claims 11-12 recite only a single means element. By this Amendment, Applicant has amended the claims 1-13 to improve clarity.

Claims 1, 2 and 11-13 are rejected under 35 U.S.C. § 102(b) as being anticipated by Bruckert et al. (USP 5,446,727; hereafter "Bruckert"). Claims 1, 3 and 11-13 are rejected under 35 U.S.C. § 102(b) as being anticipated by Suonvieri et al. (USP 5,668,804; hereafter "Suonvieri"). Claims 1, 7-9 and 11-13 are rejected under 35 U.S.C. § 102(b) as being anticipated by Dupuy et al. (USP 5,479,409; hereafter "Dupuy"). Claims 1 and 10 are rejected under 35 U.S.C. § 102(e) as being anticipated by Terry (US 2002/0080749 A1). Claims 1 and 4 are rejected under 35 U.S.C. § 102(b) as being anticipated by Muszynski (USP 5,722,074). Claims 5 and 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Suonvieri in view of Muszynski.

Applicant respectfully submits that the claimed invention would not have been anticipated by or rendered obvious in view of the cited references.

Independent claim 1 recites "generating at said mobile station an adjustment command for adjusting said transmit times; and performing adjustments of said transmit times at said mobile

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station based on said adjustment command, wherein said adjustment command is generated based on adjustment control information received from said network so that said adjustments performed by said mobile station are controlled by said network." Claims 11-13 recite similar limitations.

Bruckert discloses a CDMA mobile communication system wherein a base station determines time positions based signals received from mobile subscriber units and transmits the alignment signal to the subscriber units so that subsequent signals transmitted from the subscriber units are received in time alignment (see col. 3, lines 3-12). Suonvieri discloses measuring a timing offset at a base station and transmitting a timing advance signal to a mobile station which advances its transmission time based on the timing advance signal. Dupuy discloses a method of transmitting timing advance data calculated by a base station to a mobile station. Terry discloses calculating a timing deviation at a base station and transmitting a timing adjustment command to a mobile terminal. Thus, in each of the cited references, it is the network which provides the time adjustments that a mobile station should apply.

Muszynski discloses sending timing alignment requests from a base station to a mobile switching center for controlling a time alignment of downlink transmissions from the mobile switching center. Muszynski addresses the problem of phase frame alignment between radio frames and the corresponding terrestrial frames (see for example col. 4, lines 1-31) rather than adjustment of transmit times on the radio interface between network and mobile stations.

On the other hand, the present invention teaches that a mobile station performs time adjustments including not only applying time adjustments but also generating the time adjustments to be applied. As explained in more detail in the present application, the present

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invention teaches control by the network of these operations performed by the mobile stations, in particular to avoid the kind of drawbacks disclosed in the introduction of the present application. For example, an adjustment command generated in a mobile station corresponds to the command (discussed at page 7 lines 3-5 with reference to Figs. 2 and 3) for adjusting the transmit times of the mobile station, the command being generated by the adjustment means 4 in the mobile station UE. Further, control by the network corresponds to the sending by the network to the mobile station of information noted CI3 for the control of time adjustments.

Accordingly, Applicant respectfully submits that claims 1-13 would not have been anticipated by or rendered obvious in view of Bruckert because the cited reference does not teach or suggest all of the features of the claimed invention.

By this Amendment, Applicant has added new dependent claims 14-18 in order to further define the claimed invention. Applicant respectfully submits that claims 14-18 should be allowable at least by virtue of their dependencies on the independent claims discussed above. Further, Applicant respectfully submits that the cited references do not teach or suggest the claimed features of transmitting adjustment request information from the mobile station to the base station if a difference between reception times by the mobile station and transmission times by the mobile station is outside a predetermined range; transmitting adjustment control information from the base station to the mobile station in response to the adjustment request information; and adjusting a transmit time at the mobile station based on the adjustment control information.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

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Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.


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